

## **Influential Article Review - Examining Interactions in Collaborative Innovation Activities**

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*This paper examines innovation.. We present insights from a highly influential paper. Here are the highlights from this paper: Collaborations in innovation work between competitors have become a common practice in the information and communication technology sector (ICT), and substantial investments are made in such collaborations. Significant rationales for these collaborations include the high expectations placed on rapid and front-edge technology development and business exploitation. However, there is often a failure to reach the expected outcomes of such collaborations. This may be explained not only by the challenges and obstacles in technology development but also by the social relations within the collaborations. The purpose of this study is to explore the role of social exchange in the outcomes of early-stage innovation collaborations. More specifically, we explore the social facilitators of exchange and how such facilitators may influence collaboration outcomes. Social exchange theory is used for this purpose. This longitudinal study is based on a 3-year collaboration project for innovation using qualitative methods (29 interviews, observations of 7 project meetings). Three phases of social exchange in the collaboration are empirically identified: the dating phase, brainstorming phase, and decision phase. Three social facilitators of social exchange within these phases are conceptualized: trust, commitment, and congruence. Further, direct contacts are conceptualized as a social accelerator fueling these social facilitators. This study advances understanding of social facilitators in social exchange and their significance regarding success/failure outcomes. Risks of lock-in situations in collaborations for innovation are outlined in a knowledge exchange paradox. For our overseas readers, we then present the insights from this paper in Spanish, French, Portuguese, and German.*

*Keywords: Collaboration model, Innovation, Exchange, Social facilitators, Trust, Project failure*

### **SUMMARY**

- This article shows the role of social facilitators in project success and failure and provides implications of how such social facilitators may be accelerated by direct contact. Trust, commitment, and congruence are three interrelated facilitators, which stimulate a relational bond between the collaborating partners that facilitates productive collaborations. However, if the facilitators are weak, the collaboration may be in jeopardy and risks failure. Our findings imply that if the partners that are selected to be involved in the collaboration have appropriate

competences, significant opportunities will be provided for direct contact. A lack of competence inhibits the ability to exchange and prevents social facilitators from working efficiently in the exchange, whereas the presence of competence enables exchange, which the social facilitators enable, and the direct contacts accelerate.

- This study is anchored in Blau's work regarding the social exchange process and the collaboration in innovation that follows from organizations' desire for innovation competitiveness and growth. However, while social exchange theory offers little guidance in understanding the micro foundations of why some collaborations in innovation lead to business offerings that prosper in a marketplace while others fail, the findings of this study support the notion that social facilitators and a social accelerator in the process and outcomes of collaborations in innovation make it possible to manage the collaboration outcomes. This study shows the importance of the mechanisms, direct contacts for accelerating social facilitators for exchange, and collaboration outcomes. Although social facilitators are dealt with in collaboration agreement contracts in line with the negotiation principle, the reciprocity principle appears to be more powerful than the negation principle in successful exchange and collaboration outcomes. As such, this study provides implications regarding conceptual development to the literature on collaboration in innovation.
- The three collaboration project phases and four types of capital identified reflect the way in which social exchange influences collaboration outcomes. The conceptualization of the types of capital extends the previous research on innovation collaboration. The collaborative partners focused on building long-term relations in technology development while they placed less emphasis on generating business exploitation, which may be understood by the three social facilitators and the social accelerator.
- As with all studies, our work has limitations. We encourage future studies to use larger samples of social exchange processes to test the current findings. Such studies will help assess the reliability and validity of the presented results and further extend our knowledge of collaborative innovation processes in social exchange frameworks.

## **HIGHLY INFLUENTIAL ARTICLE**

We used the following article as a basis of our evaluation:

Schot, J., & Steinmueller, W. E. (2018). Three frames for innovation policy: R&D, systems of innovation and transformative change. *Research Policy*, 47(9), 1554-1567.

This is the link to the publisher's website:

<https://www.sciencedirect.com/science/article/pii/S0048733318301987>

## **INTRODUCTION**

Academic interest as well as practitioners and policymakers' interest has long been focused on innovation-related topics. This is not surprising, as innovations are engines allowing businesses to stay competitive and prosper in the marketplace (Amit and Schoemaker 1993; Rakhmatullin and Brennan 2014; Chronéer et al. 2015; Johansson and Malmström 2013). Successful innovations help develop successful organizations, and society benefits as new ventures emerge and grow (Osterwalder and Pigneur 2004; Chesbrough 2010). Today, interorganizational collaborations are an answer to a range of challenges that may hamper businesses from remaining competitive. Most collaborations with other organizations targeting innovation facilitate the exchange of information, knowledge, and experiences, accelerating learning and new ways of thinking and working in the organization (Malmström and Wincent 2012; Malmström et al. 2013). Although it is commonly believed that increased levels of collaboration between organizations lead to better innovation outcomes (Rigby and Edler 2005), there is debate as to the effect of collaboration on innovation outcomes, with a broad range of views on what roles such collaborations have with regard to

innovation outcomes and aligned competitiveness. Recent interest has focused on the effects of collaboration for innovation on organizational performance. One question is whether investments in collaboration for innovation result in commercial innovations (Rakhmatullin and Brennan 2014). However, much of the extant literature shows inconsistent results. While collaborations for innovation are expected to bring advantages to collaborative partners, findings in prior studies have been mixed. On the other hand, individual organizations have little incentive to make heavy investments in early-stage innovations, when the risks of failure are high.

Studies have provided evidence that collaboration for innovation alone does not guarantee successful outcomes, and in some cases, it may produce even poorer outcomes (Miles et al. 1999; Nieto and Santamaría 2007). Even so, there is a lack of insight into why collaborations succeed or fail to reach the intended outcomes, and this study aims to address this shortcoming. For collaboration to occur, some form of social exchange is needed. Thus, we posit that social exchange is critical for collaboration outcomes concerning innovation. However, studies have largely overlooked the potential of social relations to explain the outcomes of collaborations for innovation. Therefore, the purpose of this study is to explore the role of social exchange in explaining the outcomes of an early-stage innovation collaboration. More specifically, we explore social facilitators for exchange and how such facilitators may influence the collaboration outcomes. Social exchange theory is used for this purpose. As such, this research contributes with a new conceptualization of social exchange by detailing the micro foundations of social exchange. We conceptualize social exchange elements in collaboration in innovation (four types of exchange capital and social exchange mechanisms, i.e., three social facilitators and an accelerator fueling the social facilitators) and thus add to the literature on collaboration in innovation. Although our work cannot be considered definitive, our most significant contribution is demonstrating how actual collaboration work may evolve as well as the role and nature of social exchange in collaboration—something that has, to the best of our knowledge, not previously been explored.

The paper is organized as follows. First, we report on a literature review and outline the theoretical basis of social exchange in collaboration and for collaboration outcomes. Next, we discuss our case and issues pertaining to our research methods and present our analytical procedures. We then outline the findings in three identified phases—the dating phase, brainstorming phase, and decision phase—and depict the essence of exchange in these phases. This study conceptualizes three specific social facilitators and their roles in cultivating social exchange of four types of capital (financial, human, social, and innovation capital) in the three identified phases of a collaboration innovation project and examines the accelerating effect of direct contact on the social facilitators. Finally, the paper concludes with a discussion of our findings along with implications, limitations, and directions for future research.

## CONCLUSION

This article shows the role of social facilitators in project success and failure and provides implications of how such social facilitators may be accelerated by direct contact. Trust, commitment, and congruence are three interrelated facilitators, which stimulate a relational bond between the collaborating partners that facilitates productive collaborations. However, if the facilitators are weak, the collaboration may be in jeopardy and risks failure. Our findings imply that if the partners that are selected to be involved in the collaboration have appropriate competences, significant opportunities will be provided for direct contact. A lack of competence inhibits the ability to exchange and prevents social facilitators from working efficiently in the exchange, whereas the presence of competence enables exchange, which the social facilitators enable, and the direct contacts accelerate.

This study is anchored in Blau's (1964) work regarding the social exchange process and the collaboration in innovation that follows from organizations' desire for innovation competitiveness and growth. However, while social exchange theory offers little guidance in understanding the microfoundations of why some collaborations in innovation lead to business offerings that prosper in a marketplace while others fail, the findings of this study support the notion that social facilitators and a social accelerator in the process and outcomes of collaborations in innovation make it possible to manage the

collaboration outcomes. This study shows the importance of the mechanisms, direct contacts for accelerating social facilitators for exchange, and collaboration outcomes. Although social facilitators are dealt with in collaboration agreement contracts in line with the negotiation principle, the reciprocity principle appears to be more powerful than the negation principle in successful exchange and collaboration outcomes (Das and Teng 1998; Molm et al. 1999; Molm et al. 2000). As such, this study provides implications regarding conceptual development to the literature on collaboration in innovation.

The three collaboration project phases and four types of capital identified reflect the way in which social exchange influences collaboration outcomes. The conceptualization of the types of capital extends the previous research on innovation collaboration (e.g., Caloghirou et al. 2003; Hagedoorn et al. 2000; Vonortas 1997; Laperche and Liu, 2013; Spivack 2013). The collaborative partners focused on building long-term relations in technology development while they placed less emphasis on generating business exploitation, which may be understood by the three social facilitators and the social accelerator. “Poor” relationships among collaborative partners have been identified in prior studies as one reason for collaboration failure (Timmons 1994). By understanding how social facilitators drive the exchange in relationships, dysfunctional collaboration processes may be redirected, and positive interactions enhanced. Trust, commitment, and congruence are the three types of social facilitators that cultivate exchange, and our findings show how a lack of social facilitators leads to failure in achieving commercialization, sustainability, and success in technology development (Mouritsen et al. 2001). These social facilitators appear to be central for understanding collaboration project failure. Low levels of trust, commitment, and congruence impede social exchange in business exploitation and consequently result in negative outcomes since no common business offering is generated. In contrast, these facilitators enable social exchange in technology development and are accelerated by direct contacts, leading to significant progress (Blau 1964; Holmes 1981; Kingshott 2006; Johansson 2007; Blomkvist et al. 2015). Prior studies have also found that trust in collaborative relationships is crucial for exchange to result in positive effects such as technology and business exploitation (Lado et al. 2008; Das and Teng 1998). Barns and colleagues (2006) stress the importance of social relationships and trust for successful collaborative projects. In addition, prior studies have shown commitment to be useful for predicting collaborative progress (Meyer 1997; Mohr and Speakman 1994). Studies have also shown that commitment is more important for the implementation of business innovation than for the initiation of technology innovation. Congruence has also been shown to be critical for technological innovations, with a cultural foundation of congruence among partners enhancing the potential for exchange information (Gudmundson et al. 2003; Jones et al. 1997). This study adds to the insights of previous studies with a new conceptualization of social exchange that details the micro foundations of social exchange.

The partners’ unwillingness to exchange business information impeded the overall project outcome. There is a risk of a lock-in situation in innovation projects, where collaborations repeat positive progress in technology development but fail to exploit business opportunities. Such lock-in situations may place the organizations’ competitive advantages at risk, leading to a paradox. Partners contributing essential business information to the innovative collaboration may severely weaken the competitive advantages of their own organizations. In contrast, an organization that does not contribute such information to the collaboration may sustain their own competitive advantages while simultaneously impeding the progress of the innovation outcomes, thereby potentially weakening their future competitive advantages. These drives collaboration exchanges in opposite directions and highlights a collaboration exchange paradox. Taken together, this helps to explain challenges in innovation collaboration by showing that low levels of trust, commitment, and congruence improve understanding of the consequences of social facilitators in social exchange and their significance to the outcomes of innovation collaborations as well as the impact of direct contacts on the accelerating social facilitators for exchange.

Practically, this study highlights the importance of building and operating structures for exchange aligned with the scope of the collaboration project. Accordingly, the collaboration model needs to address social exchange of all types of capital central to the collaboration objectives. In addition, collaboration models need to enable trust, commitment, and congruence as well as direct collaborative contacts in the

exchange of all types of capital. Such collaboration models may enhance the outcomes of collaboration projects and simultaneously lower the potential of failure.

### **Limitations and Future Research**

As with all studies, our work has limitations. We encourage future studies to use larger samples of social exchange processes to test the current findings. Such studies will help assess the reliability and validity of the presented results and further extend our knowledge of collaborative innovation processes in social exchange frameworks. We argue for more explorative studies that include social exchange theory concerning the circumstances of collaboration in innovation. While the present study was conducted with a qualitative research setup, we encourage future researchers to expand on this topic. Social exchange processes are not static; they are adaptable social systems and typically evolve over time, which is why a qualitative approach may reveal valuable insights. Therefore, future studies are encouraged to consider further testing and development through longitudinal studies over longer time horizons.

## **APPENDIX**

**TABLE 1**  
**EMPHASIS OF DISCOURSE IN NEGOTIATED EXCHANGE**

<b>Exchange of capital</b>	<b>Words</b>	<b>Frequency</b>
Financial capital	Cost	32
	Finance	24
	Price	5
	Revenue	2
Sum		63
Human capital	Knowledge	62
	Capability	58
	Experience	53
	Competence	6
Sum		179
Social capital	Collaborate	54
	Share	22
	Exchange	20
	Integrate	11
Sum		107
Innovation capital	Testbed	515
	Technology	399
	Innovation	224
	Technique	173
Sum		1311

**TABLE 2**  
**DISCOURSE IN THE DATING PHASE**

<i>Exchange of capital—dating phase</i>	
Financial capital	<p><i>"I think anybody should be interested to pay for this kind of service..."we can decide internally how to price things, in that respect we are also dependent on the pricing of the testbed providers themselves and they don't have a clue yet how to price... So maybe the first customers will be guinea pigs and we might offer them a service for free just to figure out how things work.... We should have a business model and business plan..."we want to become big. I don't see it right now, but before that I would say first it should run, self-sustained for a couple of years..."</i></p> <p><i>"...we hope that we convince the industry, especially to commit a certain number of years to financially contribute to this collaboration model."</i></p> <p><i>"...we will find a financing model once the first income comes into the collaboration model, in terms of money flow ideally the providers would not have to pay anything."</i></p>
Human capital	<p><i>"On the project level, of course there are risks, related to the competencies of the people whether companies send the right people or if, the level of engagement is low or so."</i></p> <p><i>"I have trust in the people who are doing the technology development..."We have experience of connecting testbeds around the world. We can make it work but this far it has never been easy."</i></p>
Social capital	<p><i>"I think there is a lot of trust needed to operate this collaboration model for the benefit of all partners. This currently is really based on the social networks or the professional social networks that exist from previous relationships, from previous projects and generally the engagement of all partners in different forms of collaboration over the years. So this is how it currently works and probably it will work if we succeed to create this collaboration model and operate it and, on a sustainable basis."</i></p> <p><i>"...we have very good collaboration with project partners in the past and we still have that..."we know them and we have worked with them before..."We have developed those relationships over a number of years."</i></p> <p><i>"...competition isn't an issue as it would be for other organizations. I think the businessmen in our cluster would actually be very happy to work with a lot of the partners..."This is a good project from the idea that people meet and they know each other's companies, testbeds and R&amp;D."</i></p> <p><i>"I had close collaboration with the project management in the past and this is how we got into this collaboration...we have participated with other partners in several projects before. I'm here for collaborating in a specific technical area, it's much easier for me to do with somebody that I know."</i></p> <p><i>"If the organizations changes and people change their positions inside the organizations, you have to build trust over and over again, with different people. Sometimes in big companies if you loose one contact it takes a year or two to find another who is in charge of that business area. That's hard work."</i></p>
Innovation capital	<p><i>"Currently we have no major risks, the competition is certainly not a risk. All partners accept the fact that it is pre-competitive collaboration and even if the collaboration model creates a business case for some organization I think most of the organizations engaged, are convinced that they create an entity, a facility that is of the long term benefit of the whole industry..."I would say that technology risk is lower, knowing the other partners."</i></p> <p><i>"...you get access to others resources around Europe..."if the customers can rely on and trust the collaboration model it's useful, then they are going to use resources provided by the collaboration model and then the business model will work. If people chose the collaboration model they will pay and will help to maintain the collaboration model. If you can trust the resources then maybe you will use it."</i></p>

**TABLE 3**  
**DISCOURSE IN THE BRAINSTORMING PHASE**

*Exchange of capital—brainstorming phase*

Financial capital	<p><i>"The project is a high risk project. We've been fighting this battle for a while so, if the project cannot get the critical mass of adoption of users and of providers in the beginning of the project it will be hard for the project to continue or exist as a collaboration model...there needs to be an economic incentive for partners." "There is quite little money nowadays in the high technology based testing business. During this project we should be able to develop the tools to increase the whole business ecosystem, and when there is something to share companies will more willing join."</i></p> <p><i>"We need to clearly communicate the benefits to the industry, because we say the industry should finance a large part of it. We are not there yet, we don't have clear communication."</i></p> <p><i>"The measure for the success of the collaboration model is at the end, if it succeeds to be economically viable then this means that the collaboration model must be doing some right. If this does not succeed in the long term, if partners start to pull out, then we did something wrong."</i></p>
Human capital	<p><i>"...if it comes to the point of bringing this to the market you have to involve more people with experience and marketing. Otherwise it's a problem you cannot ask people sitting in their labs each day to come up with some clever marketing strategies; it's not just their job to think of so that's why they don't expect it."</i></p>
Social capital	<p><i>"We should have tight connections inside the project first, so we can show the use case and real business case inside the project it's then easier to make it interesting for external partners." "The collaboration model might be the center point to keep these contacts alive." "Some partners are regularly in contact, not necessary daily but at least weekly, while some partners are silent and less active." "...talk to them potential partners, face to face, know them, otherwise you cannot get them to commit." "Trust that's the most important thing. You gain trust and after that everything is easy." "Trust it's about playing golf with the right people and explaining to them why it's useful to join the collaboration and useful is just commercial interests. If you cannot earn anything on the platform it's not useful. It would be useful if we could understand the real motivation of the partners."</i></p> <p><i>"From a technical or social point of view, it really needs to be a tightly integrated team where there are actually incentives for all partners." "Organizations do not do business alone. People do business, people have relationships, and trust. Trust is an important factor. But I'm quite sure that building this kind of society around this testing business helps to know people and increases trust. If people trust each other the organizations will more or less do the same."</i></p>
Innovation capital	<p><i>"We can bring in our ideas and we can at the same time see what the others have been thinking of this same issue, this is an exchange of ideas. Exchange of resources is difficult, every partner tries to utilize their own resources best possible way, and that's natural, it's acceptable." "We want technological exchange...started to think about the business model, it's under development... and nowadays we are only thinking about the technical problems... we are not thinking right now on the business."</i></p> <p><i>"There are of course technological risk, management also, the technology is a high risk."</i></p> <p><i>"Trust has many dimensions, I don't know if it's true that the system that will be developed will be secure and natural, people will feel comfortable enough to use it. If companies feel that there may be leakage of information to somebody else that will definitely significantly disable the sustainability. Companies that are dependent on a very specific technology, like one patent, will be very skeptical if they do not get the guarantees they want from the trust point of view or because of industrial espionage and so on. But I assume that the technology is secure at a certain level where many of these problems can be handled. I think that it should not create a problem."</i></p>

**TABLE 4**  
**DISCOURSE IN THE DECISION PHASE**

<b>Exchange of capital—decision phase</b>	
Financial capital	<p>"But what could be the commercial interest of somebody to join, there could be some kind of a clash of interests for some of the partners. On one hand they already have their running operations so obviously they are also interesting in selling their own stuff. The question is now, how are actually the compensations distributed between the collaboration model and partners. I think this will be necessary to discuss because otherwise partners could reject to join the collaboration model because it's contradicting to their business model."</p> <p>"Nobody will invest money unless they also get some money."</p> <p>"...if it's useful they will use it because they gain money and if the opportunity fits in their plans they will not go out of their way to participate in the collaboration model."</p> <p>"If you don't bill them at least ask them how much they would be willing to pay for the functionality."</p>
	<p>"This is not a fast growing business area, and I don't see any venture capitalist in the world that would invest in the slow growing business opportunities."</p>
Human capital	<p>"..the most important people in the company are sales persons, because they bring in the revenue and they know what the customer wants. You should have people from sales, trying to push your concepts... These are the people that should be involved in technology projects but that never happen."</p>
	<p>"In technology there are very important partners within the project, who are on top of the latest technologies so keeping in contact with these partners is very important. However, for the big companies it is not that important, because they don't see a business opportunity..."</p>
Social capital	<p>"I think collaborating in this project is useful. Even though it fails."</p> <p>"We are still on page one and I had expected a lot more from this project and I have really made an effort. People are not interested in talking and doing business."</p> <p>"...now we have to put into the discussion of committing partners and they have to see something coming out of this."</p> <p>"Some companies are afraid of competition through the collaboration."</p> <p>"Importance of networking rather than the importance of the actual outcomes is our incentive for working with the collaboration model."</p> <p>"Good luck in getting people to sign the agreement."</p> <p>"...if we send this contract at the end of the project, I'm afraid that no one will sign it. I think that it's the similar behavior with all the major players, the bigger the partner is the less they will listen to the small players."</p> <p>"Acceptable contracts is the most challenging thing, we have descriptions of contracts, how to connect this best together but I haven't seen anybody signing those, not yet."</p>
	<p>"The success, like all projects we've been in the past, have all had a successful process but doubtful results."</p>
	<p>"I think trust is a major issue in business. It's building up and securing and maintaining that trust is always difficult. Very easily lost."</p>
Innovation capital	<p>"The project has focused on new technologies but not real business. Because real business contains very sensitive information. It's easier to share resources but in real business you cannot share information."</p>
	<p>"...they some large partners are not going to open their testbeds, so it's important that the partners are not competitors."</p>
	<p>"The collaboration is a place for you see interesting ideas and you can take them to your organization. For example, now in my company working in that area we can reinforce this idea."</p> <p>"Sometimes ideas are too early for the time and if you do it ten years later with better technology then it will be a better success, you never know."</p> <p>"I think this whole business problem is that nobody understands what it is."</p>

**TABLE 5**  
**SUMMARY OF SOCIAL FACILITATORS IN COLLABORATION PHASES**

	Dating phase			Brainstorming phase			Decision phase		
	Trust	Commitment	Congruence	Trust	Commitment	Congruence	Trust	Commitment	Congruence
Financial capital	Moderate	Moderate	High	Low	Low	Low	Low	Low	Low
Human capital	High	Moderate	Moderate	High/low	High/low	Moderate	High/low	High/low	Low
Social capital	High	High	High	High	Moderate	Moderate	Moderate	Moderate	Moderate
Innovation capital	High	High	High	Moderate	High	Moderate	Moderate	Low	Low

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### **TRANSLATED VERSION: SPANISH**

Below is a rough translation of the insights presented above. This was done to give a general understanding of the ideas presented in the paper. Please excuse any grammatical mistakes and do not hold the original authors responsible for these mistakes.

### **VERSION TRADUCIDA: ESPAÑOL**

A continuación se muestra una traducción aproximada de las ideas presentadas anteriormente. Esto se hizo para dar una comprensión general de las ideas presentadas en el documento. Por favor, disculpe cualquier error gramatical y no responsabilite a los autores originales de estos errores.

### **INTRODUCCIÓN**

El interés académico, así como el interés de los profesionales y los responsables políticos se han centrado durante mucho tiempo en temas relacionados con la innovación. Esto no es sorprendente, ya que las innovaciones son motores que permiten a las empresas mantenerse competitivas y prosperar en el mercado (Amit y Schoemaker 1993; Rakhmatullin y Brennan 2014; 2015; Johansson y Malmstrom 2013). Las innovaciones exitosas ayudan a desarrollar organizaciones exitosas, y la sociedad se beneficia a medida que surgen y crecen nuevas empresas (Osterwalder y Pigneur 2004; Chesbrough 2010). Hoy en día, las colaboraciones interorganizacionales son una respuesta a una serie de desafíos que pueden impedir que las empresas se queden competitivas. La mayoría de las colaboraciones con otras organizaciones dirigidas a la innovación facilitan el intercambio de información, conocimientos y experiencias, acelerando el aprendizaje y las nuevas formas de pensar y trabajar en la organización (Malmstrom y Wincent 2012; 2013). Aunque comúnmente se cree que el aumento de los niveles de colaboración entre las organizaciones conduce a mejores resultados de innovación (Rigby y Edler 2005), existe un debate sobre el efecto de la colaboración en los resultados de la innovación, con una amplia gama de puntos de vista sobre qué funciones tienen esas colaboraciones con respecto a los resultados de la innovación y la competitividad alineada. El interés reciente se ha centrado en los efectos de la colaboración para la innovación en el rendimiento organizacional. Una pregunta es si las inversiones en colaboración para la innovación dan lugar a innovaciones comerciales (Rakhmatullin y Brennan 2014). Sin embargo, gran parte de la literatura existente muestra resultados inconsistentes. Si bien se espera que las colaboraciones para la innovación aporten ventajas a los socios colaborativos, los resultados en estudios anteriores han sido mixtos. Por otro lado, las organizaciones individuales tienen pocos incentivos para hacer grandes inversiones en innovaciones en etapas tempranas, cuando los riesgos de fracaso son altos.

Los estudios han proporcionado pruebas de que la colaboración por sí sola para la innovación no garantiza resultados exitosos, y en algunos casos, puede producir resultados aún más pobres (Miles et al. 1999; Nieto y Santamaría 2007). Aun así, no hay una idea de por qué las colaboraciones tienen éxito o no alcanzan los resultados previstos, y este estudio tiene como objetivo abordar esta deficiencia. Para que se produzca la colaboración, se necesita algún tipo de intercambio social. Por lo tanto, planteamos que el intercambio social es fundamental para los resultados de colaboración en materia de innovación. Sin embargo, los estudios han pasado por alto en gran medida el potencial de las relaciones sociales para explicar los resultados de las colaboraciones para la innovación. Por lo tanto, el propósito de este estudio es explorar el papel del intercambio social en la explicación de los resultados de una colaboración de innovación en etapa temprana. Más específicamente, exploramos facilitadores sociales para el intercambio y cómo esos facilitadores pueden influir en los resultados de la colaboración. La teoría del intercambio social se utiliza para este propósito. Como tal, esta investigación contribuye con una nueva conceptualización del intercambio social detallando los micro fundamentos del intercambio social. Conceptualizamos los elementos del intercambio social en colaboración en la innovación (cuatro tipos de mecanismos de capital de cambio e intercambio social, es decir, tres facilitadores sociales y una aceleradora que impulsa a los facilitadores sociales) y así añadir a la literatura sobre la colaboración en innovación. Aunque nuestro trabajo no puede considerarse definitivo, nuestra contribución más significativa es demostrar cómo puede evolucionar el trabajo de colaboración real, así como el papel y la naturaleza del intercambio social en la colaboración, algo que, según lo que sabemos, no ha sido explorado previamente.

El documento se organiza de la siguiente manera. En primer lugar, informamos sobre una revisión de la literatura y delineamos la base teórica del intercambio social en la colaboración y para los resultados de la colaboración. A continuación, analizamos nuestro caso y los problemas relacionados con nuestros métodos de investigación y presentamos nuestros procedimientos analíticos. A continuación, delineamos los hallazgos en tres fases identificadas (la fase de datación, la fase de lluvia de ideas y la fase de decisión) y representamos la esencia del intercambio en estas fases. Este estudio conceptualiza tres facilitadores sociales específicos y su función en el cultivo del intercambio social de cuatro tipos de capital (capital financiero, humano, social e innovación) en las tres fases identificadas de un proyecto de innovación de colaboración y examina el efecto acelerado del contacto directo sobre los facilitadores sociales. Por último, el documento concluye con un debate sobre nuestros hallazgos junto con implicaciones, limitaciones y orientaciones para futuras investigaciones.

## **CONCLUSIÓN**

Este artículo muestra el papel de los facilitadores sociales en el éxito y el fracaso de los proyectos y proporciona implicaciones de cómo esos facilitadores sociales pueden ser acelerados por el contacto directo. La confianza, el compromiso y la congruencia son tres facilitadores interrelacionados, que estimulan un vínculo relacional entre los socios colaboradores que facilita las colaboraciones productivas. Sin embargo, si los facilitadores son débiles, la colaboración puede estar en peligro y corre el riesgo de fracasar. Nuestros hallazgos implican que, si los socios que son seleccionados para participar en la colaboración tienen competencias apropiadas, se proporcionarán oportunidades significativas para el contacto directo. La falta de competencia inhibe la capacidad de intercambio e impide que los facilitadores sociales trabajen eficientemente en el intercambio, mientras que la presencia de competencias permite el intercambio, que los facilitadores sociales permiten, y los contactos directos aceleran.

Este estudio está anclado en el trabajo de Blau (1964) sobre el proceso de intercambio social y la colaboración en innovación que se deriva del deseo de las organizaciones de competitividad y crecimiento de la innovación. Sin embargo, si bien la teoría del intercambio social ofrece poca orientación para entender las micro fundaciones de por qué algunas colaboraciones en innovación conducen a ofertas empresariales que prosperan en un mercado mientras que otras fracasan, las conclusiones de este estudio apoyan la idea de que los facilitadores y un acelerador sociales en el proceso y los resultados de las colaboraciones en innovación hacen posible gestionar los resultados de la colaboración. Este estudio muestra la importancia de los mecanismos, los contactos directos para acelerar el intercambio de facilitadores sociales y los

resultados de la colaboración. Aunque los facilitadores sociales se tratan en contratos de acuerdos de colaboración de conformidad con el principio de negociación, el principio de reciprocidad parece ser más poderoso que el principio de negociación en los resultados exitosos de intercambio y colaboración (Das y Teng 1998; 1999; 2000). Como tal, este estudio proporciona implicaciones con respecto al desarrollo conceptual de la literatura sobre la colaboración en innovación.

Las tres fases del proyecto de colaboración y los cuatro tipos de capital identificados reflejan la forma en que el intercambio social influye en los resultados de la colaboración. La conceptualización de los tipos de capital amplía la investigación previa sobre la colaboración en innovación (por ejemplo, Caloghirou et al. 2003; 2000; Vonortas 1997; Laperche y Liu, 2013; Spivack 2013). Los socios colaborativos se centraron en la construcción de relaciones a largo plazo en el desarrollo tecnológico, al tiempo que pusieron menos énfasis en la generación de explotación empresarial, lo que puede ser entendido por los tres facilitadores sociales y la aceleradora social. Las relaciones "pobres" entre los socios colaborativos se han identificado en estudios anteriores como una de las razones del fracaso de la colaboración (Timmons 1994). Al comprender cómo los facilitadores sociales impulsan el intercambio de relaciones, los procesos de colaboración disfuncional pueden ser redirigidos y las interacciones positivas mejoradas. La confianza, el compromiso y la congruencia son los tres tipos de facilitadores sociales que cultivan el intercambio, y nuestros hallazgos muestran cómo la falta de facilitadores sociales conduce al fracaso en la comercialización, la sostenibilidad y el éxito en el desarrollo tecnológico (Mouritsen et al. 2001). Estos facilitadores sociales parecen ser fundamentales para entender el fracaso del proyecto de colaboración. Los bajos niveles de confianza, compromiso y congruencia impiden el intercambio social en la explotación empresarial y, en consecuencia, dan lugar a resultados negativos, ya que no se genera ninguna oferta comercial común. En cambio, estos facilitadores permiten el intercambio social en el desarrollo de la tecnología y se ven acelerados por contactos directos, lo que conduce a progresos significativos (Blau 1964; Holmes 1981; Kingshott 2006; Johansson 2007; 2015). Estudios previos también han encontrado que la confianza en las relaciones de colaboración es crucial para el intercambio para dar lugar a efectos positivos como la tecnología y la explotación empresarial (Lado et al. 2008; Das y Teng 1998). Barns y sus colegas (2006) subrayan la importancia de las relaciones sociales y la confianza para proyectos colaborativos exitosos. Además, estudios anteriores han demostrado ser útiles para predecir el progreso colaborativo (Meyer 1997; Mohr y Speakman 1994). Los estudios también han demostrado que el compromiso es más importante para la implementación de la innovación empresarial que para el inicio de la innovación tecnológica. También se ha demostrado que la congruencia es fundamental para las innovaciones tecnológicas, con una base cultural de congruencia entre los socios que mejora el potencial de intercambio de información (Gudmundson et al. 2003; 1997). Este estudio se suma a las perspectivas de estudios previos con una nueva conceptualización del intercambio social que detalla las micro fundas del intercambio social.

La falta de voluntad de los socios para intercambiar información comercial impidió el resultado general del proyecto. Existe el riesgo de una situación de bloqueo en los proyectos de innovación, donde las colaboraciones repiten progresos positivos en el desarrollo tecnológico, pero no aprovechan las oportunidades de negocio. Estas situaciones de bloqueo pueden poner en riesgo las ventajas competitivas de las organizaciones, lo que lleva a una paradoja. Los socios que aportan información comercial esencial a la colaboración innovadora pueden debilitar gravemente las ventajas competitivas de sus propias organizaciones. En cambio, una organización que no aporta esa información a la colaboración puede sostener sus propias ventajas competitivas al mismo tiempo que obstaculiza el progreso de los resultados de la innovación, lo que podría debilitar sus ventajas competitivas futuras. Esto impulsa los intercambios de colaboración en direcciones opuestas y destaca una paradoja del intercambio de colaboración. En conjunto, esto ayuda a explicar los desafíos de la colaboración en innovación al demostrar que los bajos niveles de confianza, compromiso y congruencia mejoran la comprensión de las consecuencias de los facilitadores sociales en el intercambio social y su importancia para los resultados de las colaboraciones en innovación, así como el impacto de los contactos directos en los facilitadores sociales acelerados para el intercambio.

En la práctica, este estudio destaca la importancia de construir y operar estructuras para el intercambio alineadas con el alcance del proyecto de colaboración. En consecuencia, el modelo de colaboración debe

abordar el intercambio social de todo tipo de capitales centrales para los objetivos de colaboración. Además, los modelos de colaboración deben permitir la confianza, el compromiso y la congruencia, así como los contactos colaborativos directos en el intercambio de todo tipo de capital. Estos modelos de colaboración pueden mejorar los resultados de los proyectos de colaboración y, al mismo tiempo, reducir el potencial de fracaso.

### **Limitaciones de unainvestigación futura**

Al igual que con todos los estudios, nuestro trabajo tiene limitaciones. Alentamos futuros estudios a utilizar muestras más grandes de procesos de intercambio social para probar los hallazgos actuales. Estos estudios ayudarán a evaluar la fiabilidad y validez de los resultados presentados y ampliarán aún más nuestro conocimiento de los procesos de innovación colaborativa en los marcos de intercambio social. Abogamos por estudios más exploratorios que incluyan la teoría del intercambio social sobre las circunstancias de la colaboración en la innovación. Si bien el presente estudio se llevó a cabo con una configuración de investigación cualitativa, alentamos a los futuros investigadores a ampliar este tema. Los procesos de intercambio social no son estáticos; son sistemas sociales adaptables y normalmente evolucionan con el tiempo, por lo que un enfoque cualitativo puede revelar información valiosa. Por lo tanto, se alienta a los estudios futuros a considerar más pruebas y desarrollo a través de estudios longitudinales en horizontes de tiempo más largos.

### **TRANSLATED VERSION: FRENCH**

Below is a rough translation of the insights presented above. This was done to give a general understanding of the ideas presented in the paper. Please excuse any grammatical mistakes and do not hold the original authors responsible for these mistakes.

### **VERSION TRADUITE: FRANÇAIS**

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### **INTRODUCTION**

L'intérêt académique ainsi que l'intérêt des praticiens et des décideurs se concentrent depuis longtemps sur des sujets liés à l'innovation. Cela n'est pas surprenant, car les innovations sont des moteurs qui permettent aux entreprises de demeurer concurrentielles et de prospérer sur le marché (Amit et Schoemaker, 1993 ; Rakhmatullin et Brennan 2014 ; Chronéer et coll. 2015 ; Johansson et Malmström 2013). Les innovations réussies aident à développer des organisations réussies, et la société profite à mesure que de nouvelles entreprises émergent et se développent (Osterwalder et Pigneur, 2004 ; Chesbrough 2010). Aujourd'hui, les collaborations interorganisationnelles sont une réponse à toute une série de défis qui peuvent empêcher les entreprises de rester compétitives. La plupart des collaborations avec d'autres organisations ciblant l'innovation facilitent l'échange d'informations, de connaissances et d'expériences, accélérant l'apprentissage et de nouvelles façons de penser et de travailler dans l'organisation (Malmström et Wincent 2012 ; Malmström et coll. 2013). Bien que l'on croie généralement que l'augmentation des niveaux de collaboration entre les organisations mène à de meilleurs résultats en matière d'innovation (Rigby et Edler, 2005), il y a un débat sur l'effet de la collaboration sur les résultats en matière d'innovation, avec un large éventail de points de vue sur les rôles que ces collaborations ont en ce qui concerne les résultats en matière d'innovation et la compétitivité harmonisée. L'intérêt récent s'est concentré sur les effets de la collaboration pour l'innovation sur le rendement organisationnel. Une question est de savoir si les investissements dans la collaboration pour l'innovation aboutissent à des innovations commerciales (Rakhmatullin et Brennan 2014). Cependant, une grande partie de la littérature existante montre des résultats incohérents. Bien que l'on s'attende à ce que les collaborations pour l'innovation apportent des

avantages aux partenaires collaboratifs, les résultats des études antérieures ont été mitigés. D'autre part, les organisations individuelles sont peu incitées à investir lourdement dans les innovations à un stade précoce, lorsque les risques d'échec sont élevés.

Des études ont démontré que la collaboration pour l'innovation à elle seule ne garantit pas des résultats positifs et, dans certains cas, elle peut produire des résultats encore plus médiocres (Miles et coll., 1999 ; Nieto et Santamaría, 2007). Néanmoins, il y a un manque de perspicacité sur les raisons pour lesquelles les collaborations réussissent ou n'atteignent pas les résultats escomptés, et cette étude vise à remédier à cette lacune. Pour que la collaboration se produise, une certaine forme d'échange social est nécessaire. Ainsi, nous postulons que l'échange social est essentiel pour les résultats de la collaboration en matière d'innovation. Toutefois, les études ont largement négligé le potentiel des relations sociales pour expliquer les résultats des collaborations pour l'innovation. Par conséquent, le but de cette étude est d'explorer le rôle de l'échange social dans l'explication des résultats d'une collaboration d'innovation à un stade précoce. Plus précisément, nous explorons les facilitateurs sociaux pour l'échange et comment ces facilitateurs peuvent influencer les résultats de la collaboration. La théorie des échanges sociaux est utilisée à cette fin. À ce titre, cette recherche contribue à une nouvelle conceptualisation de l'échange social en détaillant les micro-fondements de l'échange social. Nous conceptualisons des éléments d'échange social en collaboration dans l'innovation (quatre types de mécanismes de capital d'échange et d'échange social, c'est-à-dire trois facilitateurs sociaux et un accélérateur alimentant les facilitateurs sociaux) et ajoutons ainsi à la littérature sur la collaboration dans l'innovation. Bien que notre travail ne puisse être considéré comme définitif, notre contribution la plus importante est de démontrer comment le travail de collaboration réel peut évoluer ainsi que le rôle et la nature de l'échange social en collaboration, ce qui, au meilleur de notre connaissance, n'a pas été exploré auparavant.

Le document est organisé comme suit. Tout d'abord, nous faisons rapport sur une revue de la littérature et décrivons la base théorique de l'échange social en collaboration et pour les résultats de la collaboration. Ensuite, nous discutons de notre cas et des questions relatives à nos méthodes de recherche et présentons nos procédures analytiques. Nous décrivons ensuite les résultats en trois phases identifiées — la phase de datation, la phase de remue-méninges et la phase de décision — et dépeignons l'essence de l'échange dans ces phases. Cette étude conceptualise trois facilitateurs sociaux spécifiques et leur rôle dans la culture de l'échange social de quatre types de capital (capital financier, humain, social et d'innovation) dans les trois phases identifiées d'un projet d'innovation de collaboration et examine l'effet accéléré du contact direct sur les facilitateurs sociaux. Enfin, le document se termine par une discussion de nos conclusions ainsi que des implications, des limites et des orientations pour la recherche future.

## CONCLUSION

Cet article montre le rôle des facilitateurs sociaux dans la réussite et l'échec des projets et donne des implications sur la façon dont ces facilitateurs sociaux peuvent être accélérés par le contact direct. La confiance, l'engagement et la congruence sont trois facilitateurs interdépendants, qui stimulent un lien relationnel entre les partenaires collaborateurs qui facilite les collaborations productives. Toutefois, si les facilitateurs sont faibles, la collaboration peut être compromise et risque d'être compromise. Nos constatations impliquent que si les partenaires sélectionnés pour participer à la collaboration ont des compétences appropriées, des possibilités importantes seront offertes pour le contact direct. Le manque de compétence empêche l'échange et empêche les facilitateurs sociaux de travailler efficacement dans l'échange, alors que la présence de compétences permet l'échange, ce que les facilitateurs sociaux permettent, et que les contacts directs s'accélèrent.

Cette étude est ancrée dans les travaux de Blau (1964) sur le processus d'échange social et la collaboration dans l'innovation qui découle du désir des organisations de compétitivité et de croissance en matière d'innovation. Toutefois, bien que la théorie des échanges sociaux offre peu de conseils pour comprendre les microfondations des raisons pour lesquelles certaines collaborations dans le domaine de l'innovation mènent à des offres commerciales qui prospèrent sur un marché alors que d'autres échouent, les résultats de cette étude appuient l'idée que les facilitateurs sociaux et un accélérateur social dans le

processus et les résultats des collaborations dans l'innovation rendent possible la gestion des résultats de la collaboration. Cette étude montre l'importance des mécanismes, des contacts directs pour accélérer les facilitateurs sociaux pour les échanges et des résultats de collaboration. Bien que les facilitateurs sociaux soient traités dans le cadre de contrats d'accord de collaboration conformes au principe de négociation, le principe de réciprocité semble être plus puissant que le principe de négation dans le succès des résultats d'échange et de collaboration (Das et Teng, 1998 ; Molm et coll. 1999 ; Molm et coll. 2000). À ce titre, cette étude donne des répercussions sur le développement conceptuel de la littérature sur la collaboration dans le domaine de l'innovation.

Les trois phases du projet de collaboration et les quatre types de capital identifiés reflètent la façon dont les échanges sociaux influencent les résultats de la collaboration. La conceptualisation des types de capitaux prolonge les recherches antérieures sur la collaboration en matière d'innovation (p. Ex., Caloghirou et coll. 2003 ; Hagedoorn et coll. 2000 ; Vonortas, 1997 ; Laperche et Liu, 2013; Spivack 2013). Les partenaires collaboratifs se sont concentrés sur l'établissement de relations à long terme dans le développement technologique, tout en mettant moins l'accent sur la production d'exploitation des entreprises, ce qui peut être compris par les trois facilitateurs sociaux et l'accélérateur social. Les relations « médiocres » entre partenaires collaboratifs ont été identifiées dans des études antérieures comme l'une des raisons de l'échec de la collaboration (Timmons, 1994). En comprenant comment les facilitateurs sociaux stimulent l'échange dans les relations, les processus de collaboration dysfonctionnels peuvent être réorientés et les interactions positives améliorées. La confiance, l'engagement et la congruence sont les trois types de facilitateurs sociaux qui cultivent l'échange, et nos conclusions montrent comment le manque de facilitateurs sociaux conduit à l'échec dans la commercialisation, la durabilité et le succès dans le développement technologique (Mouritsen et al., 2001). Ces facilitateurs sociaux semblent être au cœur de la compréhension de l'échec du projet de collaboration. Les faibles niveaux de confiance, d'engagement et de congruence entravent les échanges sociaux dans l'exploitation des entreprises et, par conséquent, entraînent des résultats négatifs puisqu'aucune offre commerciale commune n'est générée. En revanche, ces facilitateurs permettent des échanges sociaux dans le développement technologique et sont accélérés par des contacts directs, conduisant à des progrès significatifs (Blau, 1964 ; Holmes, 1981 ; Kingshott, 2006 ; Johansson, 2007 ; Blomkvist et coll. 2015). Des études antérieures ont également révélé que la confiance dans les relations de collaboration est cruciale pour que l'échange se traduise par des effets positifs tels que la technologie et l'exploitation des entreprises (Lado et coll., 2008 ; Das et Teng, 1998). Barns et ses collègues (2006) soulignent l'importance des relations sociales et de la confiance pour des projets de collaboration couronnés de succès. En outre, des études antérieures ont montré que l'engagement était utile pour prédire les progrès de la collaboration (Meyer, 1997 ; Mohr et Speakman, 1994). Des études ont également montré que l'engagement est plus important pour la mise en œuvre de l'innovation commerciale que pour l'initiation de l'innovation technologique. Il a également été démontré que la congruence est essentielle pour les innovations technologiques, avec une base culturelle de congruence entre les partenaires qui améliore le potentiel d'échange d'informations (Gudmundson et coll., 2003 ; Jones et coll., 1997). Cette étude s'ajoute aux idées des études précédentes avec une nouvelle conceptualisation de l'échange social qui détaille les micro-fondements de l'échange social.

Le refus des partenaires d'échanger des renseignements commerciaux a entravé le résultat global du projet. Il existe un risque de blocage dans les projets d'innovation, où les collaborations répètent des progrès positifs dans le développement technologique mais ne parviennent pas à exploiter les opportunités d'affaires. De telles situations de verrouillage peuvent mettre en péril les avantages concurrentiels des organisations, ce qui entraîne un paradoxe. Les partenaires qui fournissent des informations commerciales essentielles à la collaboration novatrice peuvent affaiblir considérablement les avantages concurrentiels de leurs propres organisations. En revanche, une organisation qui ne fournit pas de telles informations à la collaboration peut maintenir ses propres avantages concurrentiels tout en empêchant les progrès des résultats de l'innovation, affaiblissant ainsi potentiellement leurs avantages concurrentiels futurs. Ceux-ci favorisent les échanges de collaboration dans des directions opposées et mettent en évidence un paradoxe d'échange de collaboration. Pris dans leur ensemble, cela contribue à expliquer les défis de la collaboration en matière d'innovation en montrant que les faibles niveaux de confiance, d'engagement et de congruence

améliorent la compréhension des conséquences des facilitateurs sociaux dans l'échange social et de leur importance pour les résultats des collaborations en matière d'innovation ainsi que de l'impact des contacts directs sur l'accélération des facilitateurs sociaux pour l'échange.

Concrètement, cette étude souligne l'importance de la construction et de l'exploitation de structures d'échange alignées sur la portée du projet de collaboration. Par conséquent, le modèle de collaboration doit aborder l'échange social de tous les types de capitaux au cœur des objectifs de collaboration. En outre, les modèles de collaboration doivent permettre la confiance, l'engagement et la congruence ainsi que des contacts collaboratifs directs dans l'échange de tous les types de capital. De tels modèles de collaboration peuvent améliorer les résultats des projets de collaboration et réduire simultanément le risque d'échec.

### **Limitations and Future Research**

Comme pour toutes les études, notre travail a des limites. Nous encourageons les études futures à utiliser des échantillons plus importants de processus d'échange social pour tester les résultats actuels. De telles études aideront à évaluer la fiabilité et la validité des résultats présentés et à étendre davantage notre connaissance des processus d'innovation collaborative dans les cadres d'échange social. Nous soutenons des études plus exploratives qui incluent la théorie des échanges sociaux concernant les circonstances de la collaboration dans l'innovation. Bien que la présente étude ait été menée dans le contexte d'une recherche qualitative, nous encourageons les futurs chercheurs à s'étendre sur ce sujet. Les processus d'échange social ne sont pas statiques ; ils sont des systèmes sociaux adaptables et évoluent généralement au fil du temps, c'est pourquoi une approche qualitative peut révéler des idées précieuses. Par conséquent, les études futures sont encouragées à envisager d'autres tests et développements au moyen d'études longitudinales sur de plus longs horizons temporels.

### **TRANSLATED VERSION: GERMAN**

Below is a rough translation of the insights presented above. This was done to give a general understanding of the ideas presented in the paper. Please excuse any grammatical mistakes and do not hold the original authors responsible for these mistakes.

### **ÜBERSETZTE VERSION: DEUTSCH**

Hier ist eine ungefähre Übersetzung der oben vorgestellten Ideen. Dies wurde getan, um ein allgemeines Verständnis der in dem Dokument vorgestellten Ideen zu vermitteln. Bitte entschuldigen Sie alle grammatikalischen Fehler und machen Sie die ursprünglichen Autoren nicht für diese Fehler verantwortlich.

### **EINLEITUNG**

Das akademische Interesse sowie das Interesse von Praktikern und politischen Entscheidungsträgern konzentrieren sich seit langem auf innovationsbezogene Themen. Dies ist nicht verwunderlich, da Innovationen Motoren sind, die es Unternehmen ermöglichen, wettbewerbsfähig zu bleiben und auf dem Markt zu gedeihen (Amit und Schoemaker 1993; Rakhmatullin und Brennan 2014; Chronéer et al. 2015; Johansson und Malmström 2013). Erfolgreiche Innovationen helfen, erfolgreiche Organisationen zu entwickeln, und die Gesellschaft profitiert, wenn neue Unternehmungen entstehen und wachsen (Osterwalder und Pigneur 2004; Chesbrough 2010). Heute sind interorganisatorische Kooperationen eine Antwort auf eine Reihe von Herausforderungen, die Unternehmen daran hindern können, wettbewerbsfähig zu bleiben. Die meisten Kooperationen mit anderen Organisationen, die auf Innovation abzielen, erleichtern den Austausch von Informationen, Wissen und Erfahrungen und beschleunigen das Lernen und neue Denkweisen und die Arbeit in der Organisation (Malmström und Wincent 2012; Malmström et al. 2013). Obwohl allgemein angenommen wird, dass eine verstärkte Zusammenarbeit zwischen Organisationen zu besseren Innovationsergebnissen führt (Rigby und Edler 2005), gibt es eine Debatte über die Auswirkungen der Zusammenarbeit auf Innovationsergebnisse, mit einer breiten Palette von Ansichten darüber, welche

Rolle solche Kooperationen in Bezug auf Innovationsergebnisse und eine abgestimmte Wettbewerbsfähigkeit spielen. Das jüngste Interesse konzentrierte sich auf die Auswirkungen der Zusammenarbeit auf Innovationen auf die Leistung der Organisation. Eine Frage ist, ob Investitionen in die Zusammenarbeit bei Innovationen zu kommerziellen Innovationen führen (Rakhmatullin und Brennan 2014). Ein Großteil der vorhandenen Literatur weist jedoch inkonsistente Ergebnisse auf. Während Kooperationen für Innovation den Kooperationspartnern Vorteile bringen sollen, wurden die Ergebnisse in früheren Studien gemischt. Auf der anderen Seite haben einzelne Unternehmen wenig Anreiz, hohe Investitionen in Innovationen in der Frühphase zu tätigen, wenn die Risiken eines Scheiterns hoch sind.

Studien haben Beweise dafür erbracht, dass die Zusammenarbeit für Innovation allein keine erfolgreichen Ergebnisse garantiert und in einigen Fällen zu noch schlechteren Ergebnissen führen kann (Miles et al. 1999; Nieto und Santamara 2007). Dennoch fehlt es an Einsicht, warum Kollaborationen erfolgreich sind oder nicht, um die beabsichtigten Ergebnisse zu erzielen, und diese Studie zielt darauf ab, dieses Manko zu beheben. Damit eine Zusammenarbeit stattfinden kann, bedarf es einer Form des sozialen Austauschs. Daher ist der soziale Austausch für die Ergebnisse der Zusammenarbeit in Bezug auf Innovation von entscheidender Bedeutung. Studien haben jedoch das Potenzial sozialer Beziehungen, die Ergebnisse von Kooperationen für Innovation zu erklären, weitgehend übersehen. Daher besteht der Zweck dieser Studie darin, die Rolle des sozialen Austauschs bei der Erklärung der Ergebnisse einer frühen Innovationskooperation zu untersuchen. Genauer gesagt untersuchen wir soziale Vermittler für den Austausch und wie solche Vermittler die Ergebnisse der Zusammenarbeit beeinflussen können. Zu diesem Zweck wird die Theorie des sozialen Austauschs verwendet. Als solche trägt diese Forschung mit einer neuen Konzeptualisierung des sozialen Austauschs bei, indem sie die Mikrofundamente des sozialen Austauschs detailliert auflegt. Wir konzipieren soziale Austauschelemente in der Innovationszusammenarbeit (vier Arten von Austauschkapital und sozialen Austauschmechanismen, d.h. Drei soziale Vermittler und ein Beschleuniger, der die sozialen Vermittler anheizt) und ergänzen so die Literatur über die Zusammenarbeit in der Innovation. Obwohl unsere Arbeit nicht als endgültig angesehen werden kann, zeigt unser wichtigster Beitrag, wie sich die tatsächliche Zusammenarbeit entwickeln kann, sowie die Rolle und die Natur des sozialen Austauschs in der Zusammenarbeit – etwas, das nach bestem Wissen und Gewissen noch nicht erforscht wurde.

Das Papier ist wie folgt organisiert. Zunächst berichten wir über eine Literaturrecherche und skizzieren die theoretische Grundlage des sozialen Austauschs in Zusammenarbeit und für Die Ergebnisse der Zusammenarbeit. Als nächstes diskutieren wir unseren Fall und Fragen im Zusammenhang mit unseren Forschungsmethoden und stellen unsere analytischen Verfahren vor. Anschließend skizzieren wir die Ergebnisse in drei identifizierten Phasen – der Datierungsphase, der Brainstormingphase und der Entscheidungsphase – und stellen das Wesen des Austauschs in diesen Phasen dar. Diese Studie konzipiert drei spezifische soziale Vermittler und ihre Rolle bei der Pflege des sozialen Austauschs von vier Arten von Kapital (Finanz-, Human-, Sozial- und Innovationskapital) in den drei identifizierten Phasen eines Innovationsprojekts der Zusammenarbeit und untersucht die sich beschleunigende Wirkung des direkten Kontakts auf die sozialen Vermittler. Schließlich schließt das Papier mit einer Diskussion über unsere Ergebnisse zusammen mit Implikationen, Einschränkungen und Richtungen für zukünftige Forschung.

## **SCHLUSSFOLGERUNG**

Dieser Artikel zeigt die Rolle von Sozialvermittlern bei Projekterfolg und -misserfolg auf und liefert Auswirkungen darauf, wie solche sozialen Vermittler durch direkten Kontakt beschleunigt werden können. Vertrauen, Engagement und Kongruenz sind drei miteinander verbundene Vermittler, die eine beziehungsbezogene Bindung zwischen den Kooperationspartnern fördern, die produktive Zusammenarbeit erleichtert. Wenn die Vermittler jedoch schwach sind, kann die Zusammenarbeit in Gefahr sein und ein Scheitern riskieren. Unsere Ergebnisse implizieren, dass, wenn die Partner, die ausgewählt werden, um an der Zusammenarbeit beteiligt zu werden, über angemessene Kompetenzen verfügen, erhebliche Möglichkeiten für direkten Kontakt geboten werden. Mangelnde Kompetenz hemmt die Fähigkeit zum Austausch und hindert soziale Vermittler daran, effizient am Austausch zu arbeiten, während

das Vorhandensein von Kompetenz den Austausch ermöglicht, den die sozialen Vermittler ermöglichen, und die direkten Kontakte beschleunigen.

Diese Studie ist in Blaus (1964) Arbeit über den sozialen Austauschprozess und die Zusammenarbeit bei Innovationen verankert, die sich aus dem Wunsch der Organisationen nach Innovationswettbewerbsfähigkeit und Wachstum ergibt. Doch während die Theorie des sozialen Austauschs wenig Orientierung bietet, um die Mikrofundamente zu verstehen, warum einige Kooperationen im Bereich Innovation zu Geschäftsangeboten führen, die auf einem Markt gedeihen, während andere scheitern, stützen die Ergebnisse dieser Studie die Vorstellung, dass soziale Vermittler und ein sozialer Beschleuniger im Prozess und die Ergebnisse von Kooperationen in Innovation es ermöglichen, die Ergebnisse der Zusammenarbeit zu verwalten. Diese Studie zeigt die Bedeutung der Mechanismen, direkte Kontakte zur Beschleunigung sozialer Vermittler für den Austausch und Ergebnisse der Zusammenarbeit. Obwohl soziale Vermittler in Kooperationsverträgen im Einklang mit dem Verhandlungsprinzip behandelt werden, scheint das Prinzip der Gegenseitigkeit bei erfolgreichen Austausch- und Kooperationsergebnissen mächtiger zu sein als das Negationsprinzip (Das und Teng 1998; Molm et al. 1999; Molm et al. 2000). Als solche liefert diese Studie Auswirkungen auf die konzeptionelle Entwicklung der Literatur über die Zusammenarbeit in der Innovation.

Die drei Projektphasen der Zusammenarbeit und die vier identifizierten Kapitalarten spiegeln die Art und Weise wider, in der der soziale Austausch die Ergebnisse der Zusammenarbeit beeinflusst. Die Konzeption der Kapitalarten erweitert die bisherige Forschung zur Innovationszusammenarbeit (z.B. Caloghirou et al. 2003; Hagedoorn et al. 2000; Vonortas 1997; Laperche und Liu, 2013; Spivack 2013). Die Kooperationspartner konzentrierten sich auf den Aufbau langfristiger Beziehungen in der Technologieentwicklung, während sie weniger Wert auf die Generierung von Unternehmensausbeutung legten, was von den drei sozialen Vermittlern und dem Sozialen Beschleuniger verstanden werden kann. "Schlechte" Beziehungen zwischen Kooperationspartnern wurden in früheren Studien als ein Grund für das Scheitern der Zusammenarbeit identifiziert (Timmons 1994). Durch das Verständnis, wie soziale Vermittler den Austausch in Beziehungen vorantreiben, können dysfunktionale Kollaborationsprozesse umgeleitet und positive Interaktionen verbessert werden. Vertrauen, Engagement und Kongruenz sind die drei Arten von sozialen Vermittlern, die den Austausch pflegen, und unsere Ergebnisse zeigen, wie ein Mangel an sozialen Vermittlern zu Misserfolgen bei der Kommerzialisierung, Nachhaltigkeit und Erfolg in der Technologieentwicklung führt (Mouritsen et al. 2001). Diese sozialen Vermittler scheinen für das Verständnis des Scheiterns von Kooperationsprojekten von zentraler Bedeutung zu sein. Geringes Vertrauen, Engagement und Kongruenz behindern den sozialen Austausch in der Unternehmensnutzung und führen folglich zu negativen Ergebnissen, da kein gemeinsames Geschäftsangebot generiert wird. Im Gegensatz dazu ermöglichen diese Vermittler den sozialen Austausch in der Technologieentwicklung und werden durch direkte Kontakte beschleunigt, was zu bedeutenden Fortschritten führt (Blau 1964; Holmes 1981; Kingshott 2006; Johansson 2007; Blomkvist et al. 2015). Frühere Studien haben auch gezeigt, dass Vertrauen in kollaborative Beziehungen entscheidend ist, damit der Austausch zu positiven Effekten wie Technologie und Unternehmensausbeutung führt (Lado et al. 2008; Das und Teng 1998). Scheunen und Kollegen (2006) betonen die Bedeutung sozialer Beziehungen und des Vertrauens für erfolgreiche Kooperationsprojekte. Darüber hinaus haben frühere Studien gezeigt, dass Engagement für die Vorhersage kollaborativer Fortschritte nützlich ist (Meyer 1997; Mohr und Speakman 1994). Studien haben auch gezeigt, dass Engagement für die Umsetzung von Unternehmensinnovationen wichtiger ist als für die Initiierung technologischer Innovationen. Die Kongruenz hat sich auch als entscheidend für technologische Innovationen erwiesen, wobei eine kulturelle Grundlage der Kongruenz zwischen Partnern das Potenzial für den Informationsaustausch erhöht (Gudmundson et al. 2003; Jones et al. 1997). Diese Studie ergänzt die Erkenntnisse früherer Studien mit einer neuen Konzeptualisierung des sozialen Austauschs, die die Mikrofundamente des sozialen Austauschs beschreibt.

Die mangelnde Bereitschaft der Partner, Geschäftsinformationen auszutauschen, behinderte das Gesamtergebnis des Projekts. Es besteht die Gefahr einer Einschleusung in Innovationsprojekten, bei denen Kooperationen positive Fortschritte in der Technologieentwicklung wiederholen, aber Geschäftsmöglichkeiten nicht nutzen. Solche Lock-in-Situationen können die Wettbewerbsvorteile der

Organisations gefährden, was zu einem Paradoxon führt. Partner, die wesentliche Geschäftsinformationen zur innovativen Zusammenarbeit beitragen, können die Wettbewerbsvorteile ihrer eigenen Organisationen erheblich schwächen. Im Gegensatz dazu kann eine Organisation, die solche Informationen nicht zur Zusammenarbeit beiträgt, ihre eigenen Wettbewerbsvorteile aufrechterhalten und gleichzeitig den Fortschritt der Innovationsergebnisse behindern und damit ihre zukünftigen Wettbewerbsvorteile potenziell schwächen. Dies fördert den Austausch von Kollaborationen in entgegengesetzte Richtungen und hebt ein Paradoxon des Austauschs von Kollaborationen hervor. Zusammengefasst trägt dies dazu bei, die Herausforderungen in der Innovationszusammenarbeit zu erklären, indem es zeigt, dass ein geringes Maß an Vertrauen, Engagement und Kongruenz das Verständnis für die Folgen sozialer Vermittler im sozialen Austausch und deren Bedeutung für die Ergebnisse von Innovationskooperationen sowie die Auswirkungen direkter Kontakte auf die sich beschleunigenden sozialen Vermittler für den Austausch verbessert.

In der Praxis unterstreicht diese Studie die Bedeutung des Aufbaus und der Operativen von Strukturen für den Austausch, die auf den Umfang des Kooperationsprojekts abgestimmt sind. Dementsprechend muss das Kooperationsmodell den sozialen Austausch aller Arten von Kapital, das für die Ziele der Zusammenarbeit von zentraler Bedeutung ist, angehen. Darüber hinaus müssen Kooperationsmodelle Vertrauen, Engagement und Kongruenz sowie direkte kollaborative Kontakte beim Austausch aller Arten von Kapital ermöglichen. Solche Kooperationsmodelle können die Ergebnisse von Kooperationsprojekten verbessern und gleichzeitig das Potenzial eines Scheiterns senken.

### **Einschränkungen einernd-Zukunftsforschung**

Wie bei allen Studien hat auch unsere Arbeit Grenzen. Wir ermutigen zukünftige Studien, größere Stichproben von Prozessen des sozialen Austauschs zu verwenden, um die aktuellen Ergebnisse zu testen. Solche Studien werden dazu beitragen, die Zuverlässigkeit und Gültigkeit der vorgestellten Ergebnisse zu bewerten und unser Wissen über kollaborative Innovationsprozesse im Rahmen des sozialen Austauschs weiter auszubauen. Wir plädieren für explorativere Studien, die die Theorie des sozialen Austauschs über die Umstände der Zusammenarbeit in der Innovation beinhalten. Während die vorliegende Studie mit einem qualitativen Forschungsaufbau durchgeführt wurde, ermutigen wir zukünftige Forscher, sich mit diesem Thema zu befassen. Soziale Austauschprozesse sind nicht statisch; sie sind anpassungsfähige soziale Systeme und entwickeln sich in der Regel im Laufe der Zeit, weshalb ein qualitativer Ansatz wertvolle Erkenntnisse offenbaren kann. Daher werden zukünftige Studien ermutigt, weitere Tests und Entwicklungen durch Längsstudien über einen längeren Zeithorizont in Betracht zu ziehen.

### **TRANSLATED VERSION: PORTUGUESE**

Below is a rough translation of the insights presented above. This was done to give a general understanding of the ideas presented in the paper. Please excuse any grammatical mistakes and do not hold the original authors responsible for these mistakes.

### **VERSÃO TRADUZIDA: PORTUGUÊS**

Aqui está uma tradução aproximada das ideias acima apresentadas. Isto foi feito para dar uma compreensão geral das ideias apresentadas no documento. Por favor, desculpe todos os erros gramaticais e não responsabilize os autores originais responsáveis por estes erros.

### **INTRODUÇÃO**

O interesse acadêmico, bem como os profissionais e os formuladores de políticas, tem sido há muito focado em temas relacionados à inovação. Isso não surpreende, pois as inovações são motores que permitem que as empresas se mantenham competitivas e prosperem no mercado (Amit e Schoemaker 1993; Rakhmatullin e Brennan 2014; Chronéer et al. 2015; Johansson e Malmström 2013). Inovações bem-sucedidas ajudam a desenvolver organizações bem-sucedidas, e benefícios da sociedade à medida que novos empreendimentos emergem e crescem (Osterwalder e Pigneur 2004; Chesbrough 2010). Hoje,

colaborações interorganizacionais são uma resposta a uma série de desafios que podem dificultar que as empresas permaneçam competitivas. A maioria das colaborações com outras organizações voltadas à inovação facilita a troca de informações, conhecimentos e experiências, acelerando o aprendizado e novas formas de pensar e trabalhar na organização (Malmström e Wincent 2012; Malmström et al. 2013). Embora se acredite que o aumento dos níveis de colaboração entre as organizações leve a melhores resultados de inovação (Rigby e Edler 2005), há debate sobre o efeito da colaboração nos resultados da inovação, com uma ampla gama de pontos de vista sobre quais papéis tais colaborações têm em relação aos resultados de inovação e competitividade alinhada. O interesse recente se concentrou nos efeitos da colaboração para a inovação no desempenho organizacional. Uma questão é se os investimentos em colaboração para inovação resultam em inovações comerciais (Rakhmatullin e Brennan 2014). No entanto, grande parte da literatura atual mostra resultados inconsistentes. Embora as colaborações para a inovação sejam esperadas para trazer vantagens aos parceiros colaborativos, os achados em estudos anteriores foram misturados. Por outro lado, as organizações individuais têm pouco incentivo para fazer investimentos pesados em inovações em estágio inicial, quando os riscos de fracasso são altos.

Estudos têm fornecido evidências de que a colaboração para a inovação por si só não garante resultados bem-sucedidos e, em alguns casos, pode produzir resultados ainda piores (Miles et al. 1999; Nieto e Santamaría 2007). Mesmo assim, há uma falta de discernimento sobre por que as colaborações têm sucesso ou não alcançam os resultados pretendidos, e este estudo tem como objetivo resolver essa deficiência. Para que a colaboração ocorra, alguma forma de intercâmbio social é necessária. Assim, consideramos que o intercâmbio social é fundamental para os resultados da colaboração em relação à inovação. No entanto, os estudos têm negligenciado em grande parte o potencial das relações sociais para explicar os resultados das colaborações para a inovação. Portanto, o objetivo deste estudo é explorar o papel do intercâmbio social na explicação dos resultados de uma colaboração em estágio inicial de inovação. Mais especificamente, exploramos facilitadores sociais para troca e como esses facilitadores podem influenciar os resultados da colaboração. A teoria do intercâmbio social é usada para este fim. Sendo assim, esta pesquisa contribui com uma nova conceituação do intercâmbio social, detalhando os micro fundamentos do intercâmbio social. Conceituamos elementos de intercâmbio social em colaboração em inovação (quatro tipos de capital de intercâmbio e mecanismos de intercâmbio social, ou seja, três facilitadores sociais e um acelerador alimentando os facilitadores sociais) e, assim, agregamos à literatura sobre colaboração em inovação. Embora nosso trabalho não possa ser considerado definitivo, nossa contribuição mais significativa é demonstrar como o trabalho de colaboração real pode evoluir, bem como o papel e a natureza do intercâmbio social na colaboração — algo que, pelo que sabemos, não foi explorado anteriormente.

O papel é organizado da seguinte forma. Em primeiro lugar, reportamos uma revisão bibliográfica e delineamos a base teórica do intercâmbio social em colaboração e para resultados de colaboração. Em seguida, discutimos nosso caso e questões relativas aos nossos métodos de pesquisa e apresentamos nossos procedimentos analíticos. Em seguida, descrevemos os achados em três fases identificadas — a fase de namoro, a fase de brainstorming e a fase de decisão — e retratamos a essência da troca nessas fases. Este estudo conceitua três facilitadores sociais específicos e seus papéis no cultivo do intercâmbio social de quatro tipos de capital (capital financeiro, humano, social e inovação) nas três fases identificadas de um projeto de inovação de colaboração e examina o efeito acelerado do contato direto sobre os facilitadores sociais. Finalmente, o artigo conclui com uma discussão sobre nossos achados, juntamente com implicações, limitações e direções para pesquisas futuras.

## **CONCLUSÃO**

Este artigo mostra o papel dos facilitadores sociais no sucesso e fracasso do projeto e fornece implicações de como tais facilitadores sociais podem ser acelerados pelo contato direto. Confiança, comprometimento e congruência são três facilitadores interrelacionados, que estimulam um vínculo relacional entre os parceiros colaboradores que facilita colaborações produtivas. No entanto, se os facilitadores forem fracos, a colaboração pode estar em risco e corre o risco de falhar. Nossos achados implicam que, se os parceiros selecionados para participar da colaboração tiverem competências adequadas, oportunidades significativas serão fornecidas para contato direto. A falta de competência inibe a capacidade

de troca e impede que facilitadores sociais trabalhem de forma eficiente na troca, enquanto a presença de competência permite o intercâmbio, o que os facilitadores sociais permitem, e os contatos diretos aceleram.

Este estudo está ancorado no trabalho de Blau (1964) em relação ao processo de intercâmbio social e à colaboração em inovação que se decorre do desejo das organizações por competitividade e crescimento da inovação. No entanto, enquanto a teoria do intercâmbio social oferece pouca orientação na compreensão das microfundações de por que algumas colaborações em inovação levam a ofertas de negócios que prosperam em um mercado enquanto outras falham, os achados deste estudo apoiam a noção de que facilitadores sociais e um acelerador social no processo e resultados de colaborações em inovação possibilitam gerenciar os resultados da colaboração. Este estudo mostra a importância dos mecanismos, contatos diretos para acelerar facilitadores sociais para o intercâmbio e resultados de colaboração. Embora os facilitadores sociais sejam tratados em contratos de acordo de colaboração em consonância com o princípio da negociação, o princípio da reciprocidade parece ser mais poderoso do que o princípio da negação nos resultados bem-sucedidos de intercâmbio e colaboração (Das e Teng 1998; Molm et al. 1999; Molm et al. 2000). Como tal, este estudo traz implicações quanto ao desenvolvimento conceitual à literatura sobre colaboração em inovação.

As três fases do projeto de colaboração e quatro tipos de capital identificados refletem a forma como o intercâmbio social influencia os resultados da colaboração. A conceituação dos tipos de capital amplia a pesquisa anterior sobre colaboração em inovação (por exemplo, Caloghirou et al. 2003; Hagedoorn et al. 2000; Vonortas 1997; Laperche e Liu, 2013; Spivack 2013). Os parceiros colaborativos se concentraram na construção de relações de longo prazo no desenvolvimento tecnológico, ao mesmo tempo em que davam menos ênfase na geração de exploração empresarial, o que pode ser entendido pelos três facilitadores sociais e pelo acelerador social. As relações "pobres" entre parceiros colaborativos foram identificadas em estudos anteriores como uma das razões para o fracasso da colaboração (Timmons 1994). Ao entender como os facilitadores sociais impulsionam a troca nas relações, processos de colaboração disfuncional podem ser redirecionados e interações positivas aprimoradas. Confiança, comprometimento e congruência são os três tipos de facilitadores sociais que cultivam o intercâmbio, e nossos achados mostram como a falta de facilitadores sociais leva ao fracasso na realização da comercialização, sustentabilidade e sucesso no desenvolvimento tecnológico (Mouritsen et al. 2001). Esses facilitadores sociais parecem ser centrais para entender a falha do projeto de colaboração. Baixos níveis de confiança, comprometimento e congruência impedem o intercâmbio social na exploração empresarial e, conseqüentemente, resultam em resultados negativos, uma vez que nenhuma oferta comercial comum é gerada. Em contrapartida, esses facilitadores permitem o intercâmbio social no desenvolvimento de tecnologia e são acelerados por contatos diretos, levando a progressos significativos (Blau 1964; Holmes 1981; Kingshott 2006; Johansson 2007; Blomkvist et al. 2015). Estudos anteriores também descobriram que a confiança nas relações colaborativas é crucial para que o intercâmbio resulte em efeitos positivos, como tecnologia e exploração empresarial (Lado et al. 2008; Das e Teng 1998). Coleiros e colegas (2006) ressaltam a importância das relações sociais e da confiança para projetos colaborativos bem-sucedidos. Além disso, estudos anteriores mostraram compromisso de ser útil para prever o progresso colaborativo (Meyer 1997; Mohr e Speakman 1994). Estudos também mostraram que o compromisso é mais importante para a implementação da inovação empresarial do que para o início da inovação tecnológica. A congruência também tem se mostrado fundamental para as inovações tecnológicas, com uma base cultural de congruência entre os parceiros, aumentando o potencial de troca de informações (Gudmundson et al. 2003; Jones et al. 1997). Este estudo se soma aos insights de estudos anteriores com uma nova conceituação do intercâmbio social que detalha os micro fundamentos do intercâmbio social.

A relutância dos parceiros em trocar informações comerciais impediu o resultado geral do projeto. Há o risco de uma situação de lock-in em projetos de inovação, onde colaborações repetem progressos positivos no desenvolvimento de tecnologia, mas não exploram oportunidades de negócios. Tais situações de lock-in podem colocar em risco as vantagens competitivas das organizações, levando a um paradoxo. Parceiros que contribuem com informações essenciais de negócios para a colaboração inovadora podem enfraquecer severamente as vantagens competitivas de suas próprias organizações. Em contrapartida, uma organização que não contribua com essas informações para a colaboração pode sustentar suas próprias vantagens

competitivas, ao mesmo tempo em que impede o progresso dos resultados de inovação, potencialmente enfraquecendo suas vantagens competitivas futuras. Isso impulsiona as trocas de colaboração em direções opostas e destaca um paradoxo de troca de colaboração. Em conjunto, isso ajuda a explicar os desafios na colaboração em inovação, mostrando que baixos níveis de confiança, comprometimento e congruência melhoram a compreensão das consequências dos facilitadores sociais no intercâmbio social e sua importância para os resultados das colaborações de inovação, bem como o impacto dos contatos diretos sobre os facilitadores sociais acelerados para o intercâmbio.

Na prática, este estudo destaca a importância da construção e das estruturas operacionais para o intercâmbio alinhadas com o escopo do projeto de colaboração. Nesse caso, o modelo de colaboração precisa abordar o intercâmbio social de todos os tipos de capital central aos objetivos de colaboração. Além disso, os modelos de colaboração precisam permitir confiança, comprometimento e congruência, bem como contatos colaborativos diretos na troca de todos os tipos de capital. Tais modelos de colaboração podem melhorar os resultados de projetos de colaboração e, simultaneamente, diminuir o potencial de falha.

### **Limitações and Future Research**

Como em todos os estudos, nosso trabalho tem limitações. Incentivamos estudos futuros a usar amostras maiores de processos de intercâmbio social para testar os achados atuais. Tais estudos ajudarão a avaliar a confiabilidade e validade dos resultados apresentados e ampliar ainda mais nosso conhecimento dos processos de inovação colaborativa em estruturas de intercâmbio social. Defendemos estudos mais exploratórios que incluam a teoria do intercâmbio social sobre as circunstâncias da colaboração em inovação. Embora o presente estudo tenha sido conduzido com uma configuração de pesquisa qualitativa, incentivamos futuros pesquisadores a expandirem-se sobre esse tema. Os processos de intercâmbio social não são estáticos; são sistemas sociais adaptáveis e normalmente evoluem ao longo do tempo, e é por isso que uma abordagem qualitativa pode revelar insights valiosos. Portanto, estudos futuros são encorajados a considerar novos testes e desenvolvimento através de estudos longitudinais em horizontes de tempo mais longos.